

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 12-17 are presently active in this case, Claim 12 having been amended by way of the present Amendment. Care has been taken such that no new matter has been entered, as the new claims are fully supported by the original disclosure including the figures and description.

In the outstanding Official Action, Claims 12-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Akui et al. (U.S. Patent No. 4,715,360) in view of Yabe et al. (U.S. Patent No. 5,863,286). For the reasons discussed below, the Applicant requests the withdrawal of the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the cited references, either when taken singularly or in combination, do not teach or suggest all of the claim limitations.

Claim 12 of the present application recites a valved plug including, among other features, a main body portion internally formed with a constricted passage in a radial partition wall, and a nesting piece having a slit valve. An annular inward interlocking projection of the

main body portion is axially spaced from the radial partition wall by an internal annular groove formed around an inner periphery of the main body portion. The slit valve is provided in a circular fitting body portion of the nesting piece to be fitted in the main body portion. The nesting piece has an annular interlocking groove formed on an outer side of an annular interlocking flange provided at an innermost end. The annular interlocking projection has a thickness greater than an axial width of the annular interlocking groove, and an inside diameter smaller than a root diameter of the annular interlocking groove, to hold the annular interlocking projection in a compressed state by a bottom surface and riser wall portions of the annular interlocking groove when the nesting piece is coupled with the main body. And the internal annular groove has a larger axial width than the annular interlocking flange to leave a free space between the radial partition wall and the fitting body portion of the nesting piece to permit easy inward deformation of the slit valve toward the constricted passage when opened by insertion of an instrument. The Applicant respectfully submits that the Akui et al. reference and the Yabe et al. reference, either when taken singularly or in combination, do not teach or suggest all of the above limitations of Claim 12.

The Official Action acknowledges that the Akui et al. reference fails to disclose an annular interlocking projection that has a thickness greater than an axial width of the annular interlocking groove, and an inside diameter smaller than a root diameter of the annular interlocking groove, to hold the annular interlocking projection in a compressed state by a bottom surface and riser wall portions of the annular interlocking groove when the nesting piece is coupled with the main body. It is evident from a review of Figure 2, for example, that the annular flange (40) of the Akui et al. reference has a thickness that is clearly less than

the axial width of the groove on the cap (32) within which the flange (40) is received, as is evident from the gap in each of the figures between the upper surface of the cylindrical body (30) and the lower surface of flange (50).

The Official Action cites the Yabe et al. reference in an attempt to supplement the deficiencies noted above (and in the Office Action) in the teachings of the Akui et al. reference. The Official Action cites Figures 5 and 11, and column 10, line 57, through column 11, line 21 of the Yabe et al. reference for such teachings.

In Figures 5 and 11 and in column 10, lines 57-67, the Yabe et al. reference describes a forceps plug (61) that is provided with a first plug body (63) and a second plug body (64). Further, a ring shaped recess (63d) is formed on and around the inner periphery of the first plug body (63), and this ring shaped recess (63d) is resiliently engaged with a flange (64a) which is provided at a corresponding position on the part of the second plug body (64). Features at issue in the present instance are (1) the unlabeled projection on the first plug body (63) that extends above and adjacent to recess (63d) and the thickness of the unlabeled projection, as they relate to the "annular interlocking projection" of Claim 12, and (2) the unlabeled groove on the second plug body (64) that is above and adjacent flange (64a) and the axial width of the unlabeled groove, as they relate to the "annular interlocking groove" of Claim 12. As is evident from a review of all of the figures in the Yabe et al. reference that depict the mating of the first plug body (63) and the second plug body (64), a gap is present in between the upper lip of flange (64a) on the second plug body (64) and the lower lip of the unlabeled projection on the first plug body (63) that extends above and adjacent to recess (63d). If the unlabeled projection on the first plug body (63) that extends above and adjacent

to recess (63d) had a thickness greater than the axial width of the unlabeled groove on the second plug body (64) that is above and adjacent flange (64a), then no such gap could be present. Thus, the Yabe et al. reference also fails to disclose or suggest an annular interlocking projection that has a thickness greater than an axial width of the annular interlocking groove, as recited in Claim 12. Contrary to the present invention, since such a gap is present in the Yabe et al. reference, the second plug body (64) can axially slide with respect to the first plug body (63) even when the first and second bodies are mated together, which provides an unstable connection between the plug body during insertion and extraction of an instrument therethrough.

Accordingly, the Akui et al. reference and the Yabe et al. reference, either when taken singularly or in combination, fail to disclose an annular interlocking projection that has a thickness greater than an axial width of the annular interlocking groove, and an inside diameter smaller than a root diameter of the annular interlocking groove, to hold the annular interlocking projection in a compressed state by a bottom surface and riser wall portions of the annular interlocking groove when the nesting piece is coupled with the main body, as recited in Claim 12. Thus, the Applicant submits that a *prima facie* case of obviousness has not been established with respect to Claim 12, and therefore respectfully requests the withdrawal of the obviousness rejection of Claim 12.

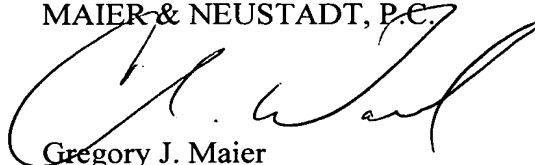
Claims 13-17 are considered allowable for the reasons advanced for Claim 12 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of Claim 12.

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Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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